

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) An A non-transitory information recording medium on which there are recorded:

content information; and

a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, the reproduction capability being a capability determined in accordance with a type, coding method, reproduction rate, processable data amount of reproducible information, on an information reproducing apparatus,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can constitutes constitute the button menu and whose display can be changed to each other,

at least one of the plurality for for button information being selected in accordance with the reproduction capability in performing the operation.

2. (currently amended) The non-transitory information recording medium according to claim 1, on which there is further recorded attribute information which indicates the reproduction capability, in association with said button information.

3. (currently amended) The non-transitory information recording medium according to claim 1, wherein there is further recorded play list information for defining reproduction sequence of said content information by a unit of item, on said information recording medium, and

    said play list information includes: item information for specifying the item which constitutes said content information; and

    sub item information for specifying said button information corresponding to the item as a sub item.

4. (currently amended) The non-transitory information recording medium according to claim 2, wherein said content information and said button information are multiplexed by a unit of packet, which is a physically accessible unit, and recorded on said information recording medium as an entire stream,

there is further recorded an object information file for storing correspondence definition information which defines a correspondence relationship between the entire stream and the plurality of packets which are multiplexed, as reproduction control information for controlling reproduction of the entire stream, and

    said attribute information is included in said object information file.

5. (currently amended) The non-transitory information recording medium according to claim 1, wherein said button information includes a plurality of button pages which can constitute the button menu and whose display can be changed to each other.

6. (currently amended) The non-transitory information recording medium according to claim 5, wherein at least one of the plurality of button pages includes button command information for defining the operation.

7. (currently amended) The non-transitory information recording medium according to claim 5, wherein at least one of the plurality of button pages includes button control information being associated with at least one button image information which is displayed and outputted as the button menu, and for displaying

and outputting the button image information.

8. (currently amended) The non-transitory information recording medium according to claim 7, wherein the button control information includes at least one of button image number information which indicates association with the button image information, display position information which indicates a display position on the button menu of a button defined by the button image information, and near-by button information which indicates a change in a state of the button caused by the operation.

9. (currently amended) The non-transitory information recording medium according to claim 1, on which there is further recorded reproduction control information for controlling such that the button menu is displayed, with it superimposed on or replaced by one portion of said content information, or is not displayed at all.

10. (currently amended) An information recording apparatus, comprising:

a first recording device for recording content information onto an information recording medium; and

a second recording device for recording a plurality of button information each of which is for defining a button menu

which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, the reproduction capability being a capability determined in accordance with the type, coding method, reproduction rate, processable data amount of reproducible information, on an information reproducing apparatus,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can ~~constitutes~~ constitute the button menu and whose display can be changed to each other,

at least one of the plurality ~~for~~ for button information being selected in accordance with the reproduction capability in performing the operation.

11. (currently amended) An information recording method, comprising:

a first recording process of recording content information onto an information recording medium; and

a second recording process of recording a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, the reproduction capability being a

capability determined in accordance with a type, coding method, reproduction rate, processable data amount of reproducible information, on an information reproducing apparatus,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can ~~constitutes~~ constitute the button menu and whose display can be changed to each other,

at least one of the plurality ~~for~~ for button information being selected in accordance with the reproduction capability in performing the operation.

12. (currently amended) An information reproducing apparatus for reproducing an information recording medium on which there are recorded:

content information; and

a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, the reproduction capability being a capability determined in accordance with a type, coding method, reproduction rate, processable data amount of reproducible information, on an information reproducing apparatus, each of said plurality of button information

comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can ~~constitutes~~ constitute the button menu and whose display can be changed to each other, at least one of the plurality ~~for~~ for button information being selected in accordance with the reproduction capability in performing the operation,

    said information reproducing apparatus comprising:

        a reproducing device for reproducing said content information and said button information recorded on said information recording medium;

        a generating device for generating the button menu on the basis of said button information; and

        a controlling device for controlling said generating device to generate the button menu according to the reproduction capability of said information reproducing apparatus.

13. (original) The information reproducing apparatus according to claim 12, wherein said reproducing device pre-loads said button information before reproduction of said content information.

14. (original) The information reproducing apparatus according to claim 12, further comprising a buffer memory for storing the generated button menu.

15. (currently amended) An information reproducing method of reproducing an information recording medium on which there are recorded:

content information; and

a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, the reproduction capability being a capability determined in accordance with a type, coding method, reproduction rate, processable data amount of reproducible information, on an information reproducing apparatus, each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can ~~constitutes~~ constitute the button menu and whose display can be changed to each other, at least one of the plurality ~~for~~ for button information being selected in accordance with the reproduction capability in performing the operation,

said information reproducing method comprising:

a reproducing process of reproducing said content information and said button information recorded on said information recording medium;

a generating process of generating the button menu according to the reproduction capability of said information reproducing apparatus, on the basis of said button information; and

a controlling process of controlling said generating process to generate the button menu according to the reproduction capability of said information reproducing apparatus.

16. (currently amended) An information recording / reproducing apparatus, comprising:

a first recording device for recording content information onto an information recording medium;

a second recording device for recording a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, the reproduction capability being a capability determined in accordance with a type, coding method, reproduction rate, processable data amount of reproducible information, on an information reproducing apparatus;

a reproducing device for reproducing said content information and said button information recorded on said information recording medium;

a generating device for generating the button menu according to the reproduction capability of said information recording / reproducing apparatus on the basis of said button information; and

a controlling device for controlling said generating device to generate the button menu according to the reproduction capability of said information recording / reproducing apparatus,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can ~~constitutes~~ constitute the button menu and whose display can be changed to each other,

at least one of the plurality ~~for~~for button information being selected in accordance with the reproduction capability in performing the operation.

17. (currently amended) An information recording / reproducing method, comprising:

a first recording process of recording content information onto an information recording medium;

a second recording process of recording a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, the reproduction capability being a capability determined in accordance with a type, coding method, reproduction rate, processable data amount of reproducible information, on an information reproducing apparatus;

a reproducing process of reproducing said content information and said button information recorded on said information recording medium;

a generating process of generating the button menu according to the reproduction capability of said information recording / reproducing method on the basis of said button information; and

a controlling process of controlling said generating process to generate the button menu according to the reproduction capability of said information recording / reproducing method,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can ~~constitutes~~ constitute the button menu and whose display can be changed to each other,

at least one of the plurality ~~for~~for button information being selected in accordance with the reproduction capability in performing the operation.

18. (currently amended) A non-transitory computer readable information recording medium with a computer program product recorded thereon for recording control to control a computer provided for an information recording apparatus, said computer program making the computer function as at least one portion of a first recording device and a second recording device,

    said information recording apparatus comprising:

    said first recording device for recording content information onto an information recording medium; and

    said second recording device for recording a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, the reproduction capability being a capability determined in accordance with a type, coding method, reproduction rate, processable data amount of reproducible information, on an information reproducing apparatus,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can ~~constitutes~~ constitute the button menu and whose display can be changed to each other,

at least one of the plurality ~~for~~ for button information being selected in accordance with the reproduction capability in performing the operation.

19. (currently amended) A non-transitory computer readable information recording medium with a computer program product recorded thereon for reproduction control to control a computer provided for an information reproducing apparatus, said computer program making the computer function as at least one portion of a reproducing device, a generating device, and a controlling device,

said information reproducing apparatus for reproducing an information recording medium on which there are recorded: content information; and a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, the reproduction capability being a capability determined in accordance with a type, coding method, reproduction rate,

processable data amount of reproducible information, on an information reproducing apparatus, each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can ~~constitutes~~ constitute the button menu and whose display can be changed to each other, at least one of the plurality ~~for~~for button information being selected in accordance with the reproduction capability in performing the operation,

    said information reproducing apparatus comprising:

    said reproducing device for reproducing said content information and said button information recorded on said information recording medium;

    said generating device for generating the button menu on the basis of said button information; and

    said controlling device for controlling said generating device to generate the button menu according to the reproduction capability of said information reproducing apparatus.

20. (currently amended) A non-transitory computer readable information recording medium with a computer program product recorded thereon for record / reproduction control to control a computer provided for an information recording / reproducing apparatus, said computer program making the computer function as at least one portion of a first recording device, a

second recording device, a reproducing device, a generating device, and a controlling device,

    said information recording / reproducing apparatus, comprising:

    said first recording device for recording content information onto an information recording medium;

    said second recording device for recording a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, the reproduction capability being a capability determined in accordance with a type, coding method, reproduction rate, processable data amount of reproducible information, on an information reproducing apparatus;

    said reproducing device for reproducing said content information and said button information recorded on said information recording medium;

    said generating device for generating the button menu according to the reproduction capability of said information recording / reproducing apparatus on the basis of said button information; and

    a controlling device for controlling said generating device to generate the button menu according to the reproduction capability of said information recording / reproducing apparatus,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can ~~constitutes~~ constitute the button menu and whose display can be changed to each other,

at least one of the plurality ~~for~~ for button information being selected in accordance with the reproduction capability in performing the operation.

21. (currently amended) A non-transitory computer readable information recording medium with a data structure recorded thereon including a control signal, comprising:

content information; and

a plurality of button information each of which is for defining a button menu which allows an operation as for said content information, for each reproduction capability which is necessary to reproduce said content information, the reproduction capability being a capability determined in accordance with a type, coding method, reproduction rate, processable data amount of reproducible information, on an information reproducing apparatus,

each of said plurality of button information comprising in advance by a combination of predetermined button pages which are determined on the basis of said reproduction capability, out of a plurality of button pages each of which can ~~constitutes~~ constitute the button menu and whose display can be changed to each other,

at least one of the plurality ~~for~~ for button information being selected in accordance with the reproduction capability in performing the operation.